

# Improving the safety of informally vended foods in Southern Africa – Training of Environmental Health Officers (EHO) in Lusaka and Harare

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## Introduction

Informally vended foods (commonly known as street vended foods) are becoming increasingly important in the economies of a number of countries. In many developing countries street food vending is thought to contribute significant income inflows for households. Street foods provide inexpensive, nutritious meals (Mosupye and von Holy, 1999). The business of street food vending needs to be addressed carefully in order to derive maximum benefits from it. Faltering economies development due to various factors, including recurrent droughts, economic structural adjustment programmes, political instability and unfavourable world trade, have seen an upward trend in street food vending.

Street vended foods are defined as those foods prepared on the street, ready to eat, or prepared at home and consumed on the street without further preparation. There is a general perception that these foods are unsafe, mainly because of the environment under which they are prepared and consumed, which exposes the food to contamination. The utensils used are also of a nature that may lead to contamination. However, some studies have shown that food prepared on the street can also be safe (von Holy, 2003).

Researchers from Zambia, Zimbabwe and the United Kingdom came together under the Crop Post Harvest Programme (CPHP) to study the safety of street foods in Lusaka and Harare. The main objective of the study was to assess the microbiological quality of the food sold on the streets in Lusaka and Harare and come up with strategies that can result in an improvement of the safety of these foods. This report focuses on the training of Environmental Health Officers (EHOs) in Lusaka and Harare on food safety and hygienic handling of food. These EHOs will in turn train informal food vendors in their respective cities.

## **Training methods**

The training programme was developed by the Institute of Food, Nutrition and Family Sciences, University of Zimbabwe, as the lead partner, with support from the National Institute for Scientific and Industrial Research (NISIR), Food and Drugs Control Laboratory (FDCL), Central Board of Health (all Zambia), and City Health Department, City of Harare, Zimbabwe. Working with regulatory and enforcement authorities will help to create a more stable business environment informal food vendors and encourage better working practices that will result in the sale of safer foods by the vendors.

Two training workshops, each lasting 10 days, were organised for Lusaka and Harare, on 1-10 March 2004 and 22 March – 1 April 2004, respectively. The training involved lectures, case studies, laboratory practical work and interactive group work. At the end of the training, participants were expected to understand what street vended (informally vended) foods are, the laws governing the sale of such foods, and the methods that can be used to improve the safety of the foods. The participants covered the following topics:

- Introduction to food microbiology
- Preparation of safe and nutritious food
- Pathogenic microorganisms and food poisoning
- Food hygiene and hygienic codes
- Requirements for the hygienic handling of street vended food
- Quality and safety of street vended foods in Africa - overview
- Food inspection techniques and inspection of street vended foods
- Application of the HACCP system to street vended foods
- Food regulatory systems in Zambia/Zimbabwe
- Training of vendors in the safe preparation of food (strategies and checklists)
- How to handle a food poisoning emergency
- Case studies
- Microbiological practical

Participants also visited selected markets in both Lusaka and Harare, where they observed operations and made recommendations. The recommendations were targeted at the policy makers and the health inspectors themselves.

## Observations

### 1. Harare

The participants visited Chinhoyi Street Bus terminus, Highfield markets (Old Highfield, Machipisa, Gazaland), and Mereki (Warren Park D). The observations at the different sites were generally similar and are outlined below:

- a. Various activities take place at the different vending sites including:
  - i. Sale of fruits and vegetables
  - ii. Vending of cooked foods
  - iii. Sale of haberdashery and clothes
  - iv. Commuter omnibus ranking
  - v. Push cart operators
  - vi. Cleaning of commuter omnibuses.
  - vii. Hawking of other items that include sweets and cigarettes.
- b. The food vending operations are taking place at undesignated sites except for Mereki, which was designated as an afterthought. The shelters at these sites were put up as the demand for the foods increased. At Chinhoyi street bus terminus, the vendors use the disused bus shelters as their preparation and serving areas (**Fig 1**). At Mereki, some structures were put up with funding from the vendors, while in Highfield, the shelters were mainly makeshift and home made.
- c. The vendors at Chinhoyi Street and Mereki are organised into groups or cooperatives. These are led by committees that serve to represent the vendors' interests. Some of the activities of the committees include allocation of stalls and collecting revenue.
- d. Sources of raw foods
  - Vegetables are bought from fellow vendors at the market place.
  - Meat and other groceries are bought at the nearby licensed shops, which include Food World, Food Chain Group and Spar.
  - Groceries like meat and milk are bought at the end of the day for use early the next morning since food preparation starts before the shops open. This means the food is carried home. Frozen chicken is thawed overnight.
- e. Equipment used
  - Firewood brazier, gas stoves, braai stands
  - Pans and pots (black-suitable for use on the fire)
  - Metal tins
  - Metal and wooden spoons
  - Plastic plates
  - Water jerricans (plastic)

- Plastic cups
- Knives
- Chip boards
- Plastic crates
- Plastic dishes/ bowls



**Figure 1.** Informal food vendors preparing food at Chinhoyi Street bus terminus in Harare.

- f. The vendors at Chinhoyi Street bus terminus are often raided by Municipal Police because their operations are considered illegal. This is mainly because this market is not designated for such activities and the requisite facilities are not available. These raids have led to vendors using inferior equipment like metal tins and makeshift braziers to avoid losing the more expensive equipment. The metal tins are bought from Mbare home industries. The type and quality of metals used are highly questionable especially for use in food preparation.
- g. Raw foods bought from licensed shops are transported to and from home using public transport. Firewood can also be brought from home in sacks using the same means of transport. Push ('scania') carts are also used.
- h. Equipment and raw materials like salt, mealie-meal, cooking- oil, sugar (non-perishables) are stored in makeshift cupboards such as metal trunks. At the end of the day the trunk is left with the vegetable vendors for safekeeping for a fee.
- i. **Status of Personal Hygiene**  
This is an area of major concern. Some of the vendors do not seem to have facilities to bath before starting their daily operations. The vendors interviewed also revealed that some vendors sleep at the market in cardboard shacks and they wake up in the morning and immediately start preparing food. There is a myth also that female food vendors who

do not bath have an odour that attracts male customers. Some of the female employees wore aprons, which were fairly clean. The other vendors were in their own clothes. None had headgear on. Some female employees had long and dirty nails. Other observations were:

- Hands were not washed often enough due to the inaccessibility of water.
- The food handlers washed their hands in the same bucket used for cleaning utensils.
- The vendors had no health certificates.

j. Cleaning of utensils

The utensils are washed using bar soap and cold water in a communal bucket, which was often used by two or more vendors. These utensils are washed in this water without further rinsing, even though the water may be dirty. Washed plates may be used there and then or stored in a plastic bowl or cardboard box.

k. Environmental hygiene practices

The environment was found to be generally dirty, dusty and sometimes smoky. At Chinhoyi Street, the cooking area is situated about 2 metres away from skip bins, which are usually overflowing with refuse (**Fig 2**). The cooking area is also a few metres from the public toilet, which is often blocked and dirty (**Fig 3**). Dirty water flows from the toilet. Chinhoyi has the additional problem of flies due to the location of the skip bins and toilet in relation to the cooking area. Although the skip bins are emptied regularly, the frequency does not seem adequate.

Every Saturday, Chinhoyi Street food vendors join hands to clean/sweep the market area. The vendors also watch out for those who foul their market (including street kids). These food vendors also do the cleaning of the public toilet early in the morning during weekdays. Nearby storm water drains are cleaned by these vendors regularly.



**Figure 2.** The skip bin is a few metres away from the vending site, and is often overflowing due to infrequent emptying.

## **Recommendations**

From the above observations, it was noted that informally vended foods may be a permanent feature in the future. With this in mind, therefore, the EHOs made the following recommendations:

- There is need for coordination among different agents (government, local government, industry, scientists, consumers and vendors) to avoid making conflicting legislation.
- Due to the financial constraints faced by the informal sector, it is recommended that local authorities provide the informal vendors with acceptable facilities from where they can operate. These facilities would include well-designed shelters, ample supply of portable water and sanitary facilities (toilets, washing facilities). All this should be done in consultation with the vendors so as to come up with user-friendly sites.
- Food laws should be adapted to changing circumstances but should retain the ability of regulating the safety of food.



**Figure 3.** The cooking area at Chinhoyi Street is a few metres away from the toilet.

- Food vendors and health inspectors should understand the provisions of the food laws and these laws should therefore be written in both English and the local languages.
- There should be minimum interference with the duties of Environmental Health Officers other stakeholders.
- There is need for continued training of EHOs in order to ensure uniform application of legal procedures and more complete coverage during inspections.
- Environmental Health Officer's should be adequately equipped with the tools necessary for on site tests and measurements.
- The vendors should be trained on all issues pertaining to their business such as hygiene, food laws and financial matters.
- The vendors should form associations that will facilitate communication with other groups such as consumers and health authorities.
- Consumers should also be educated on the requirements for healthy and safe food.
- Licensing fees should be within reach of the vendors because if too high/unaffordable fees are set, the vendors may resist registration.
- Vendors should be medically examined prior to commencement of business and routinely thereafter.
- The vendors should be assisted to grow into viable businesses, which can employ a number of people and can also generate real income (creating a sense of vision).

## 2. Lusaka

The participants visited Mutendere Co-operative Market, Luburma market and Soweto market in Lusaka. The activities at the different markets were varied including:

- Carpentry
- Selling of hardware
- Radio/TV/Watch Repairs
- Barber/Saloon shops
- Manufacturers of different commodities
- Wholesale and grocery shops
- Butcheries
- Sale of fresh and dried fish
- Sale of vegetables and other prepared foods

**Mtendere Cooperative market** is a legal market designated by the Lusaka Urban District Council (LUDC).

- a. The market has a committee of administrators whose role includes:
  - Monitoring the cleaning of the market,
  - Monitoring the general hygiene of the food preparation areas,
  - Ensuring the supply of safe water to the market.
  - Other activities include collecting levies and allocation of stalls.
  
- b. The immediate external surroundings are kept clean despite not being paved. There are more than 200 shops made of permanent materials plastered and painted. At the time of the visit, there were reportedly 430 vendors working at the market every day. However, most of the shops need repainting.
  
- c. Personal hygiene
  - Most of the vendors appeared unworried about personal cleanliness as shown by their appearance.
  - Most vendors were unaware of the need for medical examinations before going into the food vending business.
  - Most vendors had poor hygienic practices and often were handling food with dirty hands. Some would lick their hands and use the same dishcloth to wipe hands and dishes.
  - The food was prepared in the open and often left uncovered in the dirty surroundings. The place was full of flies which could be a health menace to both the vendors and consumers.



- Most vendors used plastic utensils which were difficult to clean and hence were used repeatedly in that state.
- d. Environmental hygiene
- The market was served by one water tap, which was obviously inadequate as people had to queue. Although the two toilets available were clean, they were inadequate for such a large number of people.
  - The market was well served with waste receptacles made from disused drums. Litter from these drums was emptied into a 6 ton hook lift bin/skip provide by the Lusaka Waste Management Unit under the Lusaka City Council. However, collection of these skips was very infrequent, resulting in them overflowing and therefore litter spilling around.

### Recommendations for Mtendere market

- There is need for additional water points and toilets at the market.
- The vendors need to be sensitized on the need for good hygienic practices in order to improve the safety of the food prepared at the market.
- The local authority needs to provide additional refuse handling facilities as well as clean water and good drainage.

### Soweto Market

This is located behind the City Market along Los Angeles Road, Lusaka.

- a. Status of personal hygiene
- The vendors were generally unhygienic as shown by their dirty clothing. They had no protective clothing such as aprons, head covers, etc.
  - There were no hand washing facilities available and vendors would improvise with plastic dishes.
- b. Environmental hygiene
- The market is in dire need of re-planning (**Fig 4**). The drainage system is very poor and dysfunctional. The whole market is full of flies and this problem gets worse in the rainy season.
  - There is no running water, no toilets and no refuse bins. Garbage is piled around the working places everyday, resulting in a repulsive stench being emitted. There is therefore a high risk of cross contamination.



**Figure 4.** The inadequate drainage and refuse collection situation at Soweto market

### **Recommendations for Soweto market**

- There is dire need for the market to be re-organised or re-designed so that food vending operations are done in places where there are sufficient sanitary facilities. There is need for several clean water points, toilets and refuse disposal containers.
- The food vendors have to be trained on proper hygienic handling of food.

### **Luburma market**

Luburma market is located in the second class shopping area of Lusaka commonly known as Kamwala. This market was established around 1965 and it currently has a population of about 7000 vendors. The market was not rehabilitated from the time it was built until 2003 when new structures were built around the market. The illegal stalls were left untouched by this new development. The market is run by the Lusaka City Council. Apart from the council workers, there are committees that have been set up by vendors themselves, which deal with health, security and funeral support. Several activities, other than food vending take place at Luburma and these are similar to those at Soweto and Mutendere.

#### **a. Personal hygiene status**

The personal hygiene of food handlers was also poor, similar to Soweto. The vendors had inappropriate clothing, did not wash hands between handling food and doing other things and used the same utensils to handle different food items posing the risk of cross

contamination. The vendors also used plastic plates and cups, which showed signs of insufficient or inefficient cleaning. None of the food handlers was medically examined.

b. Environmental hygiene practices

- The food vendors have small open buckets that they use as bins in the restaurants. The bins are either placed inside the restaurant or outside by the door. When the bins are full, they are emptied into a central container provided by Lusaka City Council for the market. The central container is collected for final disposal by the city council every two days.
- The market has both open and closed drains. The closed drain is operational whereas the open drain is not. There is stagnant water in the open drain. The open drain is poorly designed. Sometimes refuse and waste water from restaurants is thrown into the open drains, making it unsightly, creating smell nuisances and attracting flies.
- The old toilets are in a dilapidated state. Walls are dirty, and most window panes are broke. The water taps and hand basin are defective hampering effective cleaning. There are no showers provided and there is no soap provided for hand washing.
- However the new toilets have modern sanitary facilities like hand wash basins, bowl urinals, water closets and showers. The new toilets are managed by Lusaka City Council. There is continuous cleaning by council employees.

### **Recommendations for Luburma market**

After the visit, it was observed that a number of issues need to be addressed in order to improve the safety of food sold at this market:

- The vendors should identify and establish a reliable source of raw materials, which can be easily traced in the event of a problem.
- The market leaders should provide adequate refuse bins.
- Suitable storage facilities separate for raw and cooked foods should be provided.
- Replace the plastic plates with enamel plates which are easy to clean and ensure a detergent is used for cleaning.
- Serving spoons should be provided for each and every type of food served.

- All food handlers should be medically examined and provided with protective clothing.
- Sanitary facilities used by food vendors should be provided with hand washing soap.
- The open drain system should be properly designed and maintained.
- The old toilets should be completely rehabilitated and water reconnected.
- Built-in storage facilities under the restaurant counters should be repaired and well maintained.
- Walls should be redecorated.
- The council should provide a second refuse container so that there is a receptacle for refuse when one is collected for disposal.
- Cooking should not be done on the veranda of the restaurant.

## **Conclusion**

The observations from both Lusaka and Harare show that informally vended food is sold in less than satisfactory environments. The food handlers may be aware of the need to be hygienic, but in most cases they were not practising this. There is great potential for cross-contamination, contamination from the food handlers and the environment. The informal food vendors concede that there is need to re-emphasise the important points in the hygienic handling of food through on-site training and regular visits from the Health inspectors. Local leaders in both cities who have a bearing on the running of the markets should be involved in the implementation of some of the recommendations. Food vendors should be encouraged to operate from designated places and local authorities should provide the necessary infrastructure in order to improve the quality of informally vended food.

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